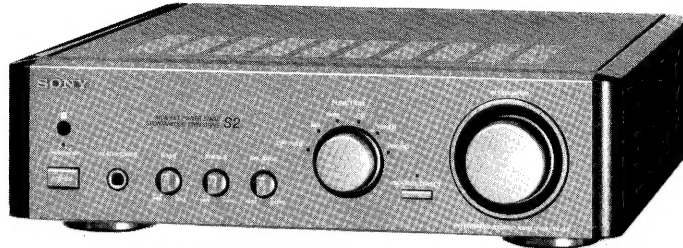


# TA-S2

## SERVICE MANUAL

*AEP Model  
UK Model*



TA-S2 is the integrated stereo amplifier section in SHC-S2. (UK model only)

### SPECIFICATIONS

#### Amplifier selection

Continuous RMS power output

(German model)  
40 + 40 watts (4 ohms at 1 kHz,  
DIN)  
48 + 48 watts (4 ohms at 1 kHz,  
5 % THD)  
(other models)  
40 + 40 watts (6 ohms at 1 kHz,  
DIN)  
50 + 50 watts (6 ohms at 1 kHz,  
5 % THD)

Music power output

(German model)  
100 + 100 watts (4 ohms at 1  
kHz, 10 % THD)  
(other models)  
85 + 85 watts (6 ohms at 1 kHz,  
10 % THD)

Total harmonic distortion

0.01% at rated 15 W 1 kHz  
output (SOURCE DIRECT ON)

Residual noise

Less than 150  $\mu$ V, 6 ohms,  
Network A

Frequency response

PHONO MM (20 Hz - 20 kHz):  
RIAA equalization curve  $\pm 0.5$   
dB  
TUNER, CD, TAPE, MD, DAT/  
VIDEO, ADAPTOR IN: 10 Hz -  
50 kHz  $\pm 3$ dB

Input sensitivity

PHONO: MM, 2.5 mV, 50  
kilohms  
TUNER, CD, TAPE, MD, DAT/  
VIDEO, ADAPTOR IN: 150  
mV, 50 kilohms

Maximum input capability (1 kHz)

PHONO: MM, 150 mV at 1 kHz

S/N (network)

PHONO: 85 dB(A) (SOURCE  
DIRECT ON)  
CD: 100 dB(A) (SOURCE  
DIRECT ON)

Output voltage impedance

TAPE, MD, DAT/VIDEO,  
ADAPTOR: 150 mV, 2 kilohms  
HEADPHONES: 25 milliwatts  
at 8 ohms, Accepts low and  
high impedance headphones.

Tone controls

BASS:  $\pm 7$  dB at 100 Hz  
TREBLE:  $\pm 6$  dB at 10 kHz

#### General

System

Pure-complementary SEPP  
MOS FET power amplifier

Power requirements

220 - 230 V AC, 50/60 Hz

Power consumption

(German model) 90 W  
(other models) 85 W

— Continued on next page —

INTEGRATED STEREO AMPLIFIER  
**SONY**<sup>®</sup>

Mains

1 switched, 175 W max.

Dimensions

Approx. 310 × 90 × 360 mm (12  
1/4 × 3 5/8 × 14 1/4 inches)  
(w/h/d)

Mass

Approx. 5.5 kg (12 lb 2 oz)

Supplied accessories

Remote commander RM-S1 (1)

Sony SUM-3 (NS) (2)

Audio bus cable (1)



The above values are measured at 230 V AC.  
(Models for European countries.)

Design and specifications are subject to  
change without notice.

## TABLE OF CONTENTS

<u>Section</u>	<u>Title</u>	<u>Page</u>
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3-1.	Circuit Boards Location .....	4
3-2.	Block Diagram .....	5
3-3.	Printed Wiring Boards .....	8
3-4.	Schematic Diagram .....	11
3-5.	Semiconductor Lead Layouts .....	15
3-6.	IC Pin Function	
	• IC301 Main Controller (TMP87C846N-4109) .....	16
4.	EXPLODED VIEWS	
4-1.	Front Panel and Case Section .....	17
4-2.	Main Board Section .....	18
5.	ELECTRICAL PARTS LIST .....	19

### SAFETY-RELATED COMPONENT WARNING !!

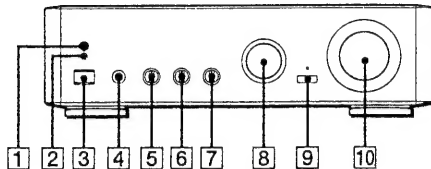
COMPONENTS IDENTIFIED BY MARK  OR DOTTED  
LINE WITH MARK  ON THE SCHEMATIC DIAGRAMS  
AND IN THE PARTS LIST ARE CRITICAL TO SAFE  
OPERATION. REPLACE THESE COMPONENTS WITH  
SONY PARTS WHOSE PART NUMBERS APPEAR AS  
SHOWN IN THIS MANUAL OR IN SUPPLEMENTS  
PUBLISHED BY SONY.

## SECTION 1 GENERAL

This section is extracted from instruction manual.

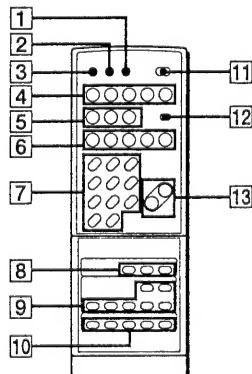
### Index to Parts and Controls

#### Front Panel



- 1 Remote sensor
- 2 ON/STANDBY indicator (7)
- 3 POWER switch (7)
- 4 HEADPHONES jack (7)
- 5 BASS control (7)
- 6 TREBLE control (7)
- 7 BALANCE control (7)
- 8 FUNCTION control (7)
- 9 SOURCE DIRECT control (7)
- 10 ATTENUATOR control (7)

#### Remote Commander



- 1 MUTING button (7)
  - 2 SOURCE DIRECT button
  - 3 FUNCTION button
- Each time you press FUNCTION, the function changes as follows:  
DAT/VIDEO → MD → TAPE → CD →  
TUNER → PHONO →...

- 4 Cassette deck operating buttons
  - ◁ (reverse side play)
  - ▷ (upper side play)
  - (stop)
  - ◀◀/▶▶ fast leftward / rightward (AMS\*)
- 5 Tuner operating buttons
  - SHIFT: Each time you press SHIFT, the letter (A - C) changes as follows:  
A → B → C →...
  - PRESET -/+ : Press - or + to select the number (0 - 9).
- 6 CD operating buttons
  - ▷ (play)
  - || (pause)
  - (stop)
  - ◀◀/▶▶ (AMS\*)
- 7 Tuner/CD numeric buttons
- 8 Tape control buttons
  - REC (recording)
  - REC MUTE (recording mute)
  - || (pause)
- 9 CD control buttons
  - CHECK: Press the button to check the programme.
  - CLEAR: Press the button to erase a specific track.
  - CONTINUE: Press the button to play tracks continuously.
  - SHUFFLE: Press the button to play tracks in random order.
  - PROGRAM: Press the button to play tracks in the desired order.
  - REPEAT: Press the button to play tracks repeatedly.
  - TIME: Press the button to change the time to be displayed.
- 10 MD control buttons
  - ▷ (play)
  - || (pause)
  - (stop)
  - ◀◀/▶▶ (AMS\*)
- 11 SYSTEM POWER switch (8)
- 12 TUNER/CD switch
- 13 ATTENUATOR +/- buttons

\*AMS: Automatic Music Sensor

## SECTION 2

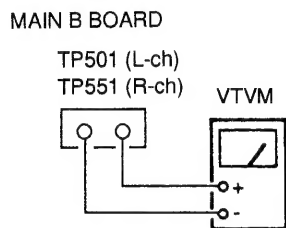
### ELECTRICAL ADJUSTMENTS

**Note :**

1. DC BIAS adjustments should be made four minutes after the POWER switch is turned on (POWER ON).
2. After replacing the power transistors, DC BIAS adjustments should be made.

#### DC Bias Adjustment (with no signal input)

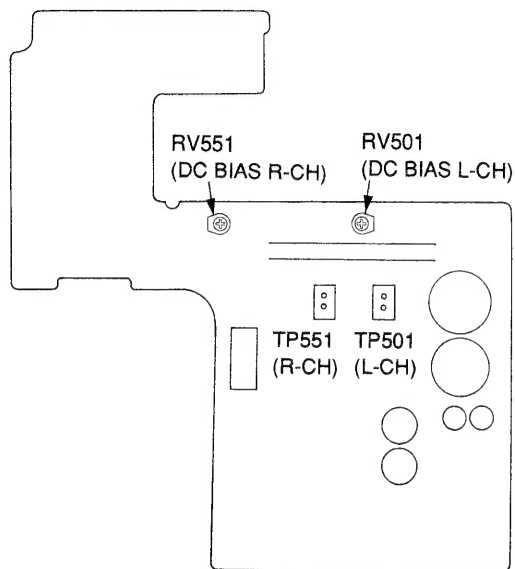
**Procedure :**



	Adjustment part	Reading on VTVM
L ch	RV501	15mV
R ch	RV551	15mV

**[MAIN BOARD]**

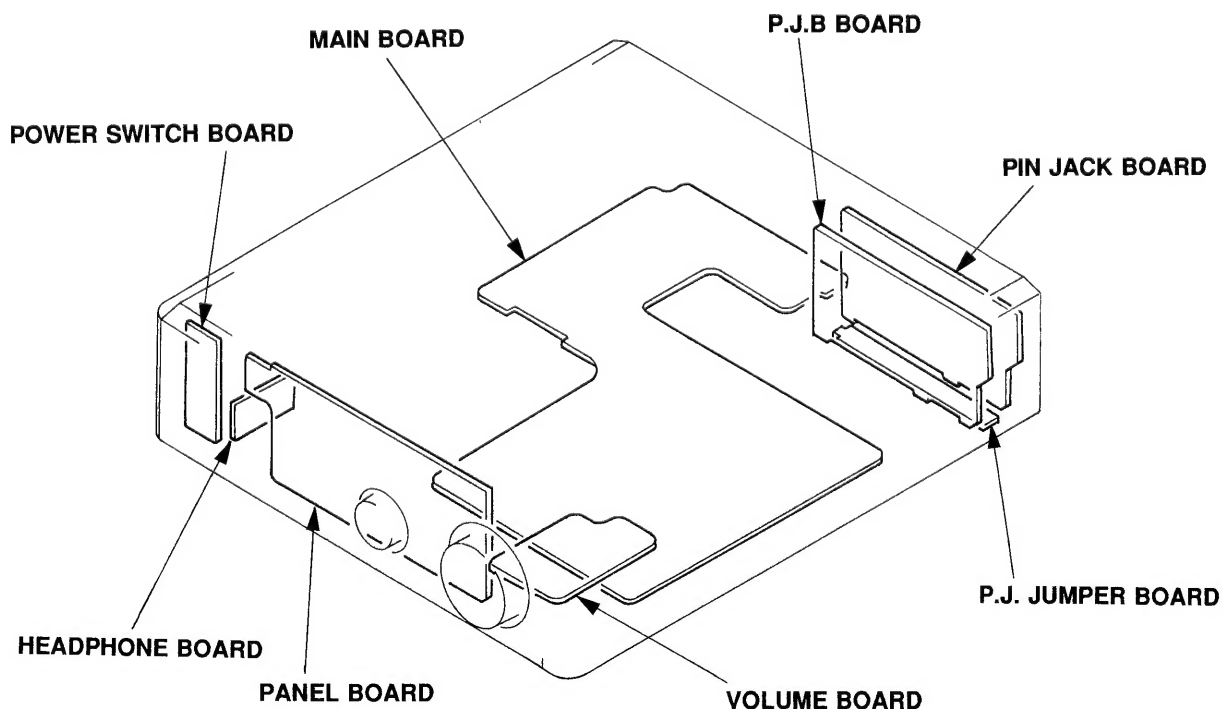
— Component Side —



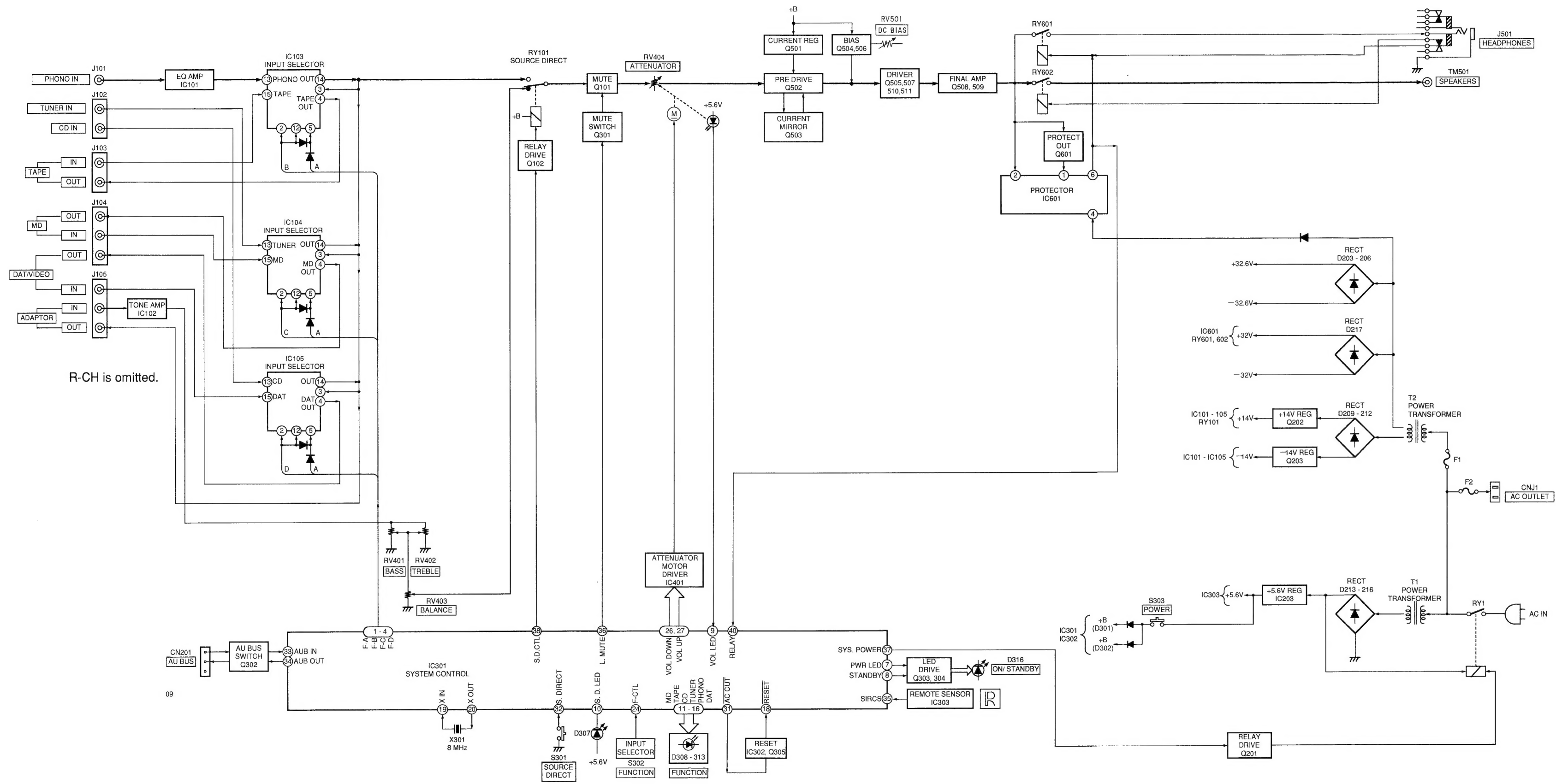
## SECTION 3

### DIAGRAMS

#### 3-1. CIRCUIT BOARDS LOCATION



## 3-2. BLOCK DIAGRAM



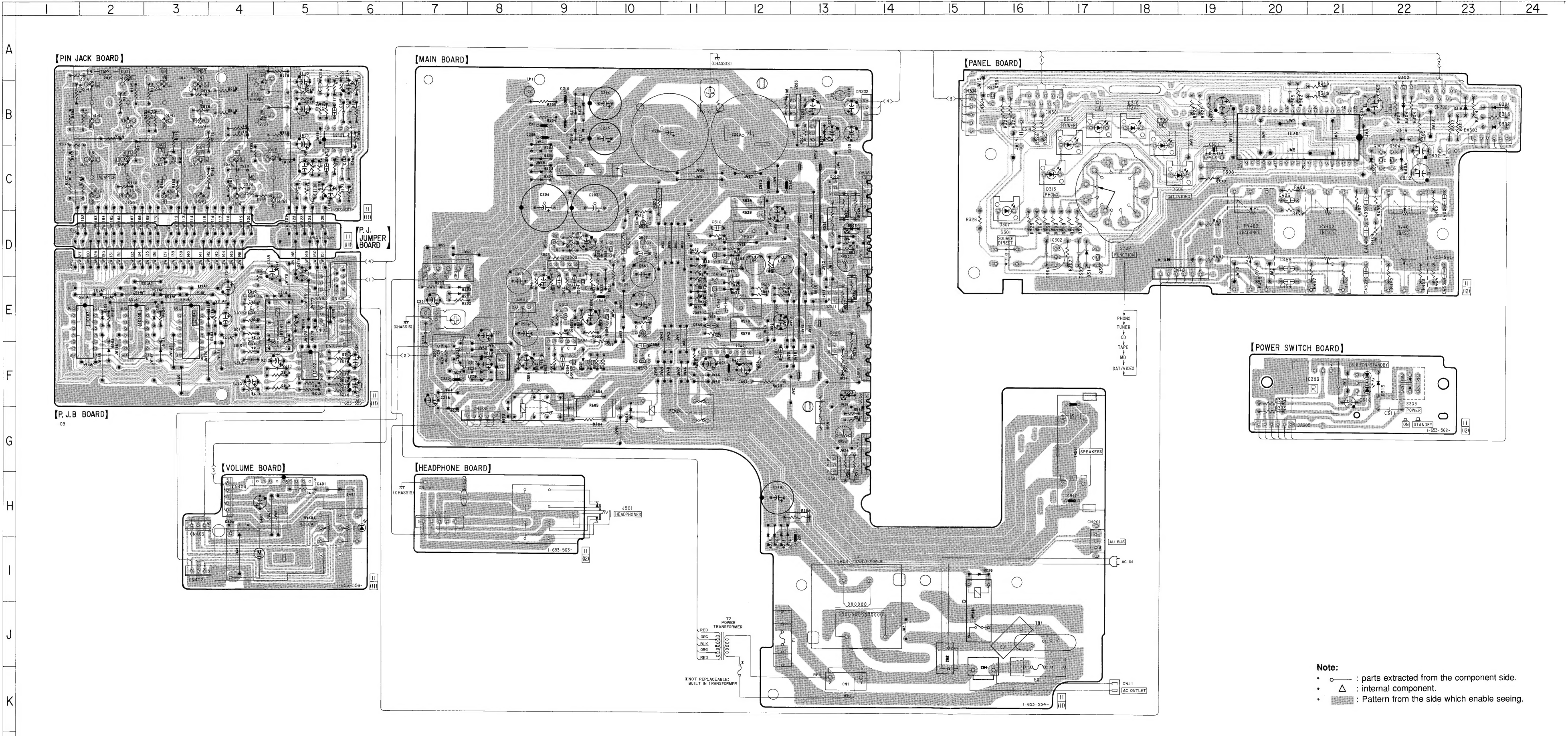


3-3. PRINTED WIRING BOARDS

- See page 4 for Circuit Boards Location.
- See page 15 for Semiconductor Lead Layouts.

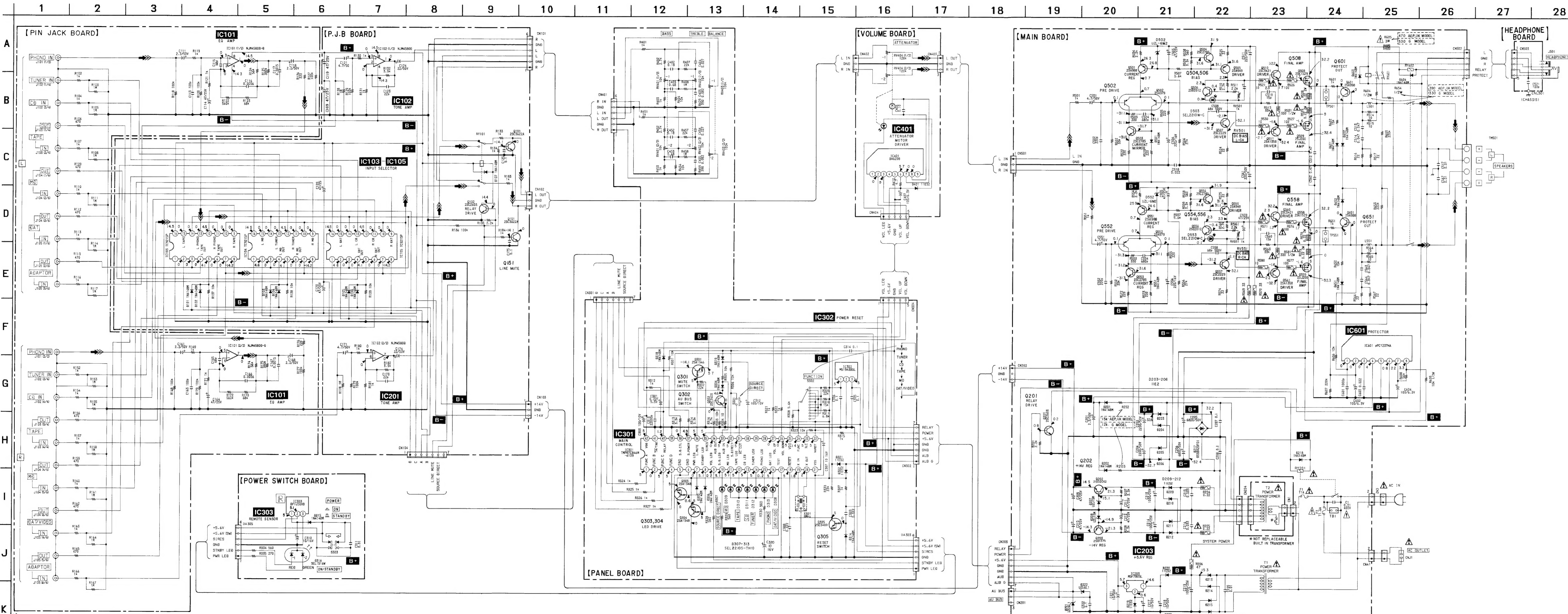
• Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D101	E-2	Q101	E-4
D102	F-2	Q102	E-4
D103	E-3	Q151	F-4
D104	E-4	Q201	F-7
D105	E-3	Q202	B-13
D106	F-3	Q203	B-13
D107	E-5	Q301	B-16
D201	E-7	Q302	B-22
D202	E-7	Q303	C-22
D203	C-9	Q304	C-22
D204	C-9	Q305	D-17
D205	C-9	Q501	D-9
D206	C-9	Q502	D-9
D207	B-13	Q503	E-9
D208	B-13	Q504	D-10
D209	B-9	Q505	D-10
D210	B-9	Q506	D-14
D211	B-9	Q507	D-10
D212	B-9	Q508	C-14
D213	I-12	Q509	E-14
D214	I-12	Q510	C-13
D215	I-12	Q511	E-13
D216	I-12	Q551	E-9
D217	C-9	Q552	F-9
D218	I-15	Q553	F-9
D219	F-8	Q554	E-10
D220	G-7	Q555	E-10
D221	F-8	Q556	F-14
D222	F-8	Q557	F-10
D301	B-23	Q558	F-14
D302	B-23	Q559	G-14
D304	B-22	Q560	E-13
D305	C-21	Q561	H-13
D306	C-22	Q601	D-11
D307	D-16	Q651	E-11
D308	C-18		
D309	B-18		
D310	B-18		
D311	B-17		
D312	B-17		
D313	C-16		
D314	D-17		
D315	F-22		
D316	F-21		
D318	B-23		
D319	B-22		
D401	H-6		
D501	E-10		
D502	D-9		
D503	D-13		
D551	F-9		
D552	E-9		
D553	F-13		
D601	D-11		
D602	D-12		
D603	G-8		
D604	G-10		
D651	E-11		
D652	E-12		
IC101	B-5		
IC102	F-5		
IC103	E-2		
IC104	E-3		
IC105	E-2		
IC203	F-8		
IC301	B-20		
IC302	D-17		
IC303	F-21		
IC401	H-5		
IC601	F-12		

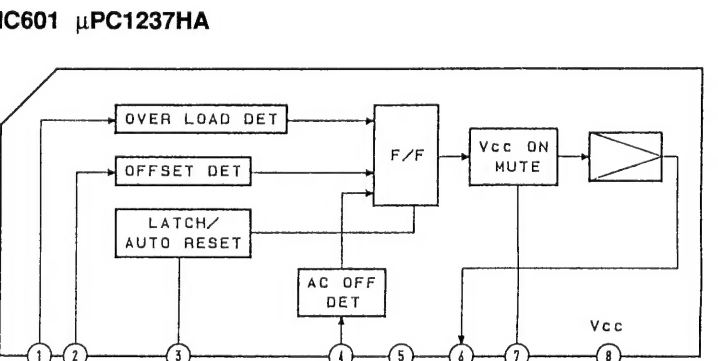
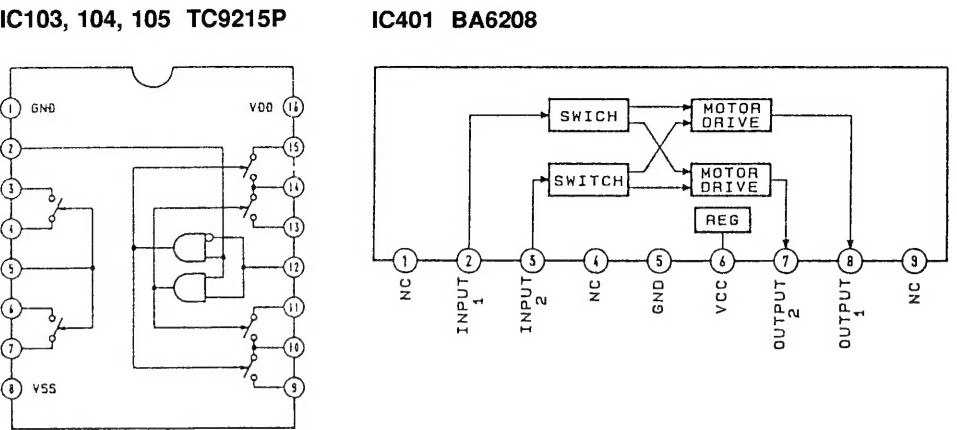




3-4. SCHEMATIC DIAGRAM  
• See page 16 for IC Pin Functions. (IC301)



• IC BLOCK DIAGRAMS



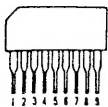
- Note:**
- All capacitors are in  $\mu\text{F}$  unless otherwise noted.  $\text{pF}$ ,  $\mu\text{F}$ ,  $50\text{WV}$  or less are not indicated except for electrolytics and tantalums.
  - All resistors are in  $\Omega$  and  $1/4\text{W}$  or less unless otherwise specified.
  - $\Delta$  : internal component.
  - $\square$  : nonflammable resistor.
  - $\square$  : fusible resistor.
  - $\square$  : panel designation.

**Note:** The components identified by mark  $\Delta$  or dotted line with mark  $\Delta$  are critical for safety. Replace only with part number specified.

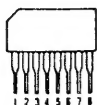
- B+** : B+ Line
- B-** : B- Line
- $\square$  : adjustment for repair.
- Voltage are dc with respect to ground under no-signal conditions.
- Voltages are taken with a VOM (Input impedance  $10\text{M}\Omega$ ). Voltage variations may be noted due to normal production tolerances.
- Signal path.
- Abbreviation
- G : German model.

### 3-5. SEMICONDUCTOR LEAD LAYOUTS

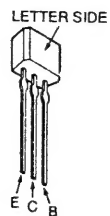
**BA6208**



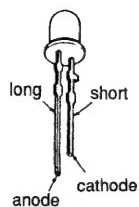
**μPC1237HA**



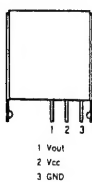
**2SC403SP-51**



**SLR34UW5**



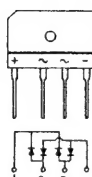
**GP1U50XB**



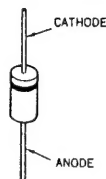
**DTA114ES  
DTA124ES  
DTC124ES  
2SC2603-EF  
2SC3622A-LK**



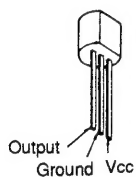
**D5SBA20F01**



**1N4148M  
10E2**



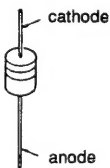
**M51943BSL**



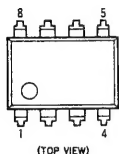
**2SA949-OY-E6  
2SA988-PAFAEA  
2SA2229-OY-E6**



**HZS6A1L  
UZL-6L1  
UZL-6M2  
UZL-15M  
11ES2**



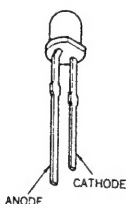
**NJM4580D  
NJM4580D-D**



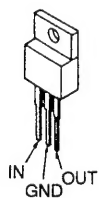
**2SA979-FG**



**SEL1516W**



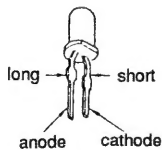
**TA7805S**



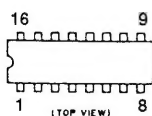
**2SA1358-OY  
2SC3421-OY**



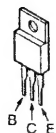
**SEL2210S-TH10**



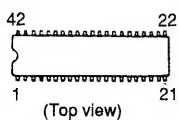
**TC9215P**



**2SB1094-LK  
2SD2012**



**TMP87C846N-4109**





### 3-6. IC PIN FUNCTION

#### • IC301 MAIN CONTROLLER (TMP87C846N-4109)

Pin No.	Pin Name	I/O	Function
1	FUNC A	O	Output control A terminal, normal: "L".
2	FUNC B	O	Output control B terminal, normal: "L".
3	FUNC C	O	Output control C terminal, normal: "L".
4	FUNC D	O	Output mute control terminal, normal: "L".
5	GND	—	GND terminal.
6	GND	—	GND terminal.
7	PWR LED	O	Power LED drive signal. (ON: L)
8	STANDBY LED	O	Standby LED drive signal. (ON: L)
9	VOL LED	O	Attenuator volume LED drive signal. (ON: L)
10	S.D. LED	O	Source direct LED drive signal. (ON: L)
11	MD LED	O	Function LED drive signal. (ON: L)
12	TAPE LED	O	Function LED drive signal. (ON: L)
13	CD LED	O	Function LED drive signal. (ON: L)
14	TUNER LED	O	Function LED drive signal. (ON: L)
15	PHONO LED	O	Function LED drive signal. (ON: L)
16	DAT LED	O	Function LED drive signal. (ON: L)
17	TEST	I	GND terminal.
18	RESET	I/O	Reset signal. (Reset: L)
19	XIN	I	Clock signal input terminal.
20	XOUT	O	Clock signal output terminal.
21	V <sub>ss</sub>	—	GND terminal.
22	VAREF	I	A/D conversion power supply terminal.
23	N.C	—	Not used.
24	FUNC	I	Position data of input selector switch.
25	V <sub>DD</sub>	—	Power supply terminal.
26	VOL DOWN	O	Attenuator volume down control signal, normal: "L".
27	VOL UP	O	Attenuator volume up control signal, normal: "L".
28	—	—	Not used. (Open)
29	—	—	Not used. (Open)
30	—	—	Not used. (Open)
31	AC CUT	I	AC cut signal. (Active: L)
32	S. DIRECT	I	Source direct key input terminal. (Active: L)
33	AUB IN	I	AU BUS signal input terminal, normal: "H".
34	AUB OUT	O	AU BUS signal output terminal, normal: "L".
35	SIRCS	I	SIRCS signal input terminal, normal: "H".
36	L. MUTE	O	Line mute control signal. (Active: L)
37	S. POWER	O	System power supply control signal. (Active: H)
38	S.D. CTL	O	Source direct control signal. (Active: H)
39	—	—	Not used. (GND)
40	RELAY	I	RELAY signal input terminal. (Active: L)
41	TA/TAE	I	TA/TAE select signal input terminal.
42	V <sub>DD</sub>	—	Power supply (+5V) terminal.

## SECTION 4

### EXPLODED VIEWS

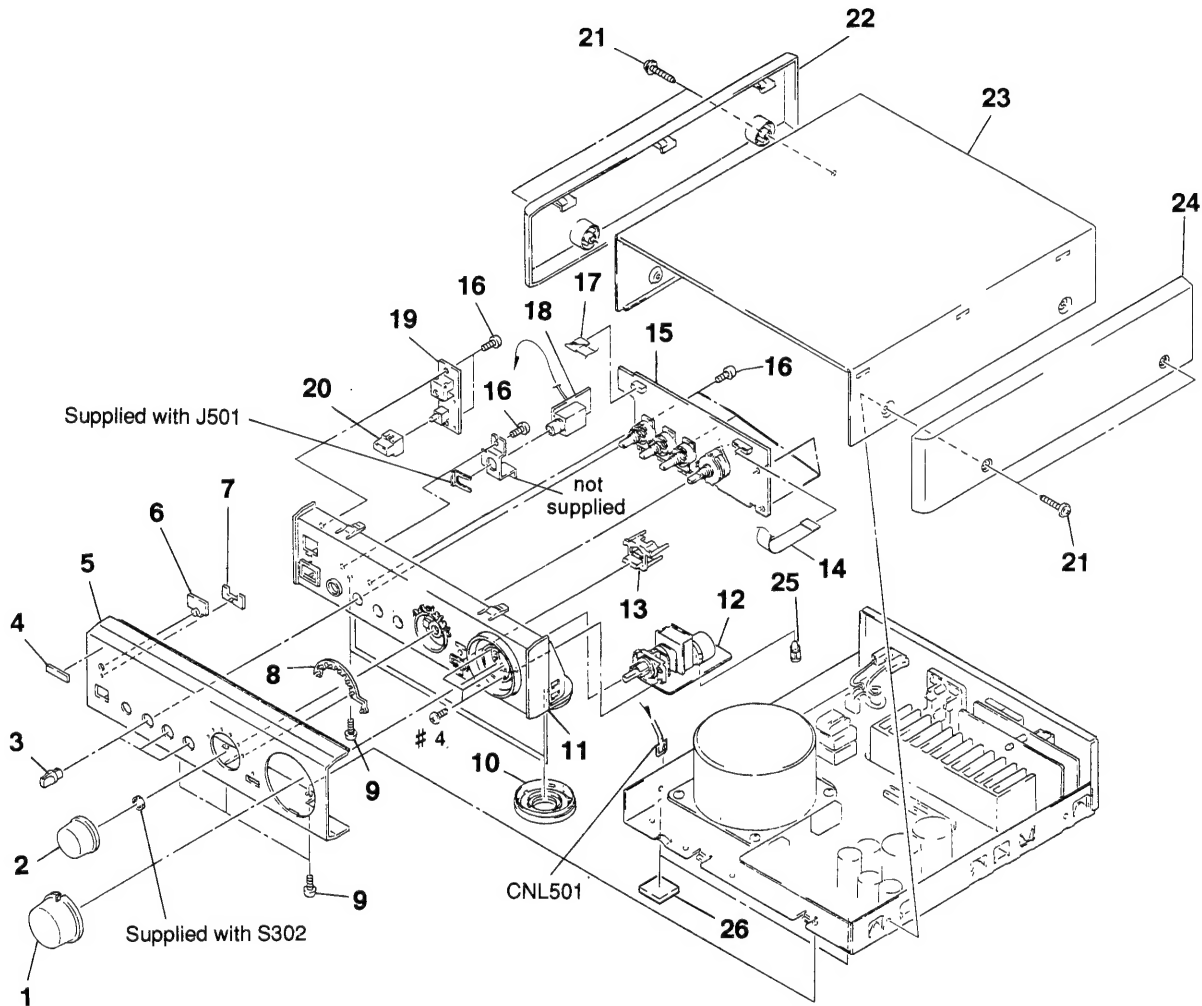
#### NOTE:

- Items marked “\*” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Abbreviation  
G : German model

- -XX, -X mean standardized parts, so they may have some difference from the original one.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and accessories and packing materials are given in the last of this parts list.

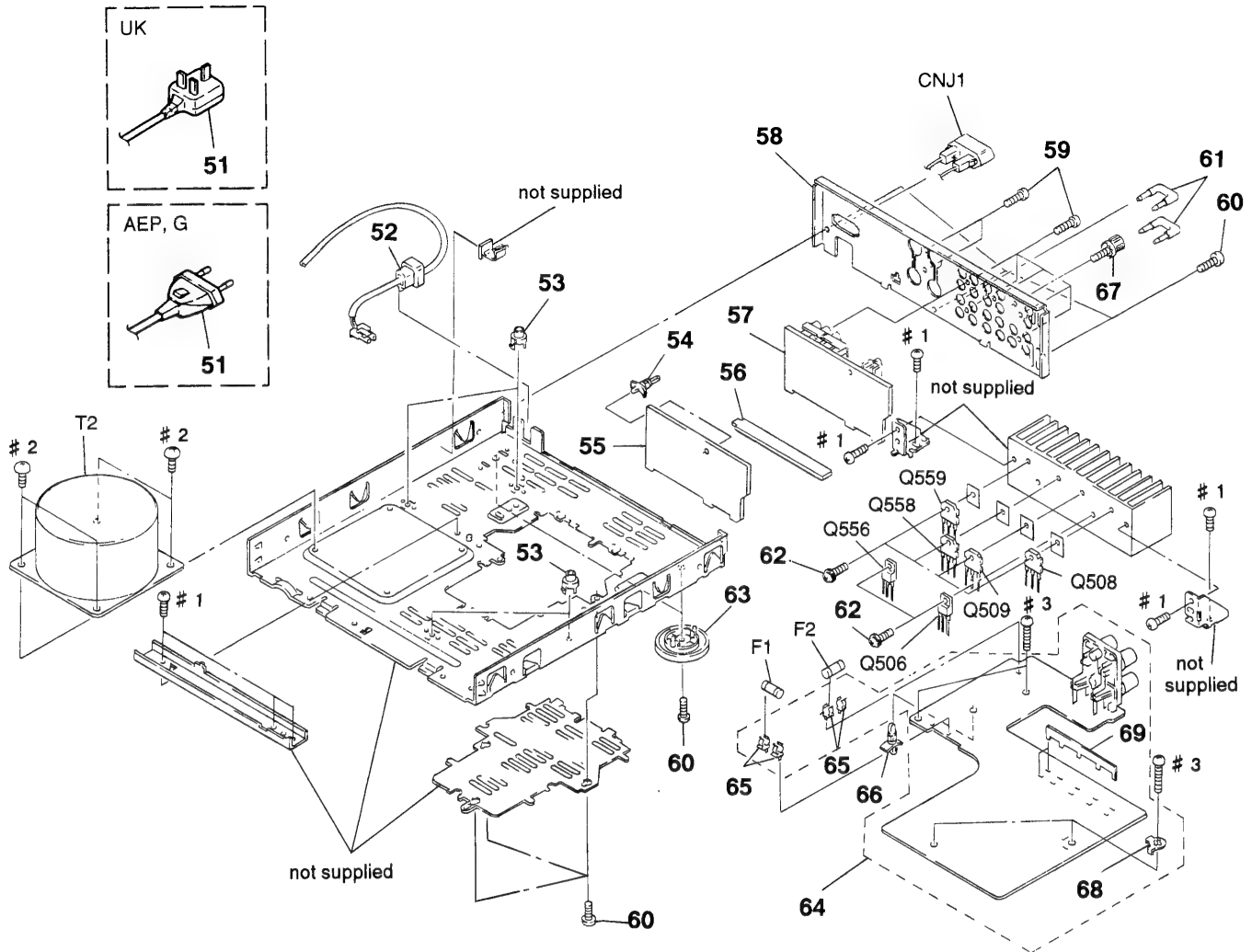
The components identified by mark or dotted line with mark are critical for safety. Replace only with part number specified.



#### 4-1. FRONT PANEL AND CASE SECTION










Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
1	X-4945-130-1	KNOB (DIA. 43) ASSY		* 15	A-4371-640-A	PANEL BOARD, COMPLETE (G)	
2	X-4945-131-1	KNOB (DIA. 31) ASSY		16	4-951-620-01	SCREW (2.6X8), +BVTP	
3	4-968-107-01	KNOB (DIA. 13)		17	1-696-986-11	WIRE (FLAT TYPE) (7 CORE)	
4	4-969-961-11	EMBLEM (NO. 4), SONY		* 18	1-653-563-11	HEADPHONE BOARD	
5	4-968-087-01	PANEL, FRONT		* 19	1-653-562-11	POWER SWITCH BOARD	
6	4-968-092-01	FILTER		20	4-968-098-01	BUTTON (P)	
7	4-968-091-01	INDICATOR (PO)		21	4-969-954-01	SCREW (SIDE PANEL)	
8	4-968-090-01	INDICATOR (FU)		22	X-4945-476-1	PANEL (L) ASSY, SIDE	
9	3-704-515-21	SCREW (BV/RING)		23	4-967-150-11	CASE	
10	X-4945-079-1	RING ASSY, FOOT		24	X-4945-477-1	PANEL (R) ASSY, SIDE	
11	X-4945-344-1	BASE ASSY, PANEL		* 25	3-350-847-21	HOLDER, PCB	
* 12	1-653-556-11	VOLUME BOARD		26	3-342-416-01	SHEET (F), INSULATING	
13	4-968-089-01	BUTTON (1)		* CNL501	1-690-880-11	LEAD (WITH CONNECTOR)	
14	1-751-801-11	WIRE (FLAT TYPE) (7 CORE)					
* 15	A-4371-633-A	PANEL BOARD, COMPLETE (AEP, UK)					

## 4-2. MAIN BOARD SECTION



The components identified by mark  or dotted line with mark  are critical for safety. Replace only with part number specified.

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
 51	1-575-651-21	CORD, POWER (AEP,G)		* 64	A-4371-637-A	MAIN BOARD, COMPLETE (G)	
 51	1-696-571-11	CORD, POWER (UK)		65	1-533-293-11	FUSE HOLDER	
* 52	3-703-244-00	BUSHING (2104), CORD (AEP, UK)		66	4-943-687-01	HOLDER, PC BOARD	
52	3-703-244-11	BUSHING (2104), CORD (G)		67	4-947-010-01	SCREW, FEEDER FIXED	
* 53	4-968-100-01	SUPPORT, PC		68	1-537-770-11	TERMINAL BOARD, GROUND	
54	4-924-098-11	HOLDER, PC BOARD		* 69	1-560-242-31	BUS BAR 5P	
* 55	1-653-559-11	P. J. B BOARD		 CNJ1	1-526-794-11	OUTLET, AC	
* 56	1-653-558-11	P. J. JUMPER BOARD		 F1	1-532-078-00	FUSE, TIME LAG (T1A 250V)	
* 57	1-653-557-11	PIN JACK BOARD		 F2	1-532-259-00	FUSE, TIME LAG (T1.6A 250V)	
* 58	4-967-149-12	PANEL, BACK (AEP)		Q506	8-729-209-15	TRANSISTOR 2SD2012	
* 58	4-967-149-22	PANEL, BACK (G)		Q508	8-729-232-45	TRANSISTOR 2SK1529-Y	
* 58	4-967-149-31	PANEL, BACK (UK)		Q509	8-729-232-46	TRANSISTOR 2SJ200-Y	
59	3-704-515-41	SCREW (BV/RING)		Q556	8-729-209-15	TRANSISTOR 2SD2012	
60	3-704-515-21	SCREW (BV/RING)		Q558	8-729-232-45	TRANSISTOR 2SK1529-Y	
61	1-535-706-11	PLUG, JUMPER		Q559	8-729-232-46	TRANSISTOR 2SJ200-Y	
62	3-905-609-01	SCREW (TRANSISTOR)		 T2	1-426-823-11	TRANSFORMER, POWER (G)	
63	X-4945-129-1	FOOT ASSY		 T2	1-426-824-11	TRANSFORMER, POWER (AEP, UK)	
* 64	A-4371-636-A	MAIN BOARD, COMPLETE (AEP, UK)					

# SECTION 5

## ELECTRICAL PARTS LIST

## NOTE:

The components identified by mark  $\Delta$  or dotted line with mark  $\Delta$  are critical for safety.  
Replace only with part number specified.

When indicating parts by reference number, please include the board name.

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked “\*” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Hardware (# mark) list and accessories and packing materials are given in the last of this parts list.
- Abbreviation  
G : German model

- RESISTORS  
All resistors are in ohms  
METAL: Metal-film resistor  
METAL OXIDE: Metal Oxide-film resistor  
F : nonflammable
- SEMICONDUCTORS  
In each case, u:  $\mu$ , for example:  
uA...:  $\mu$  A..., uPA...:  $\mu$  PA..., uPB...:  $\mu$  PB...,  
uPC...:  $\mu$  PC..., uPD...:  $\mu$  PD...
- CAPACITORS  
uF :  $\mu$  F
- COILS  
uH :  $\mu$  H

Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
*	1-653-563-11	HEADPHONE BOARD ***** < CONNECTOR >		C222	1-136-165-00	FILM 0.1uF 5%	50V
* CN503	1-564-508-11	PLUG, CONNECTOR 5P		C223	1-164-159-11	CERAMIC 0.1uF	50V
* CNL501	1-690-880-31	LEAD (WITH CONNECTOR) < JACK >		C501	1-124-927-11	ELECT 4.7uF 20%	100V
J501	1-507-854-21	JACK, LARGE TYPE (HEADPHONES)		C502	1-164-077-11	CERAMIC 220PF 10%	50V
*****				C504	1-164-083-11	CERAMIC 680PF 10%	50V
*	A-4371-636-A	MAIN BOARD, COMPLETE (AEP, UK) *****		C505	1-124-910-11	ELECT 47uF 20%	50V
*	A-4371-637-A	MAIN BOARD, COMPLETE (G) *****		C506	1-124-120-11	ELECT 220uF 20%	25V
	1-533-293-11	FUSE HOLDER		C508	1-102-989-00	CERAMIC 68PF 5%	500V
	1-537-770-21	TERMINAL BOARD, GROUND		C509	1-124-910-11	ELECT 47uF 20%	50V
*	1-560-242-31	BUS BAR 5P < CAPACITOR >		C510	1-164-023-11	CERAMIC 15PF 5%	50V
$\Delta$ C1	1-161-744-51	CERAMIC 0.01uF	400V	C511	1-126-053-11	ELECT 220uF 20%	50V
C201	1-124-925-11	ELECT 2.2uF 20%	100V	C512	1-136-173-00	FILM 0.47uF 5%	50V
C203	1-126-057-11	ELECT 2200uF 20%	50V	C513	1-136-161-00	FILM 0.047uF 5%	50V
C204	1-126-057-11	ELECT 2200uF 20%	50V	C514	1-136-161-00	FILM 0.047uF 5%	50V
C205	1-125-686-11	ELECT 6800uF 20%	50V	C517	1-136-153-00	FILM 0.01uF 5%	50V
C206	1-125-686-11	ELECT 6800uF 20%	50V	C518	1-136-157-00	FILM 0.022uF 5%	50V
C207	1-136-165-00	FILM 0.1uF 5%	50V	C551	1-124-927-11	ELECT 4.7uF 20%	100V
C208	1-136-165-00	FILM 0.1uF 5%	50V	C552	1-164-077-11	CERAMIC 220PF 10%	50V
C209	1-124-910-11	ELECT 47uF 20%	50V	C554	1-164-083-11	CERAMIC 680PF 10%	50V
C210	1-124-910-11	ELECT 47uF 20%	50V	C555	1-124-910-11	ELECT 47uF 20%	50V
C211	1-124-910-11	ELECT 47uF 20%	50V	C556	1-124-120-11	ELECT 220uF 20%	25V
C212	1-124-910-11	ELECT 47uF 20%	50V	C558	1-102-989-00	CERAMIC 68PF 5%	500V
C213	1-126-027-11	ELECT 1000uF 20%	25V	C559	1-124-910-11	ELECT 47uF 20%	50V
C214	1-126-027-11	ELECT 1000uF 20%	25V	C560	1-164-023-11	CERAMIC 15PF 5%	50V
C215	1-136-159-00	FILM 0.033uF 5%	50V	C561	1-126-053-11	ELECT 220uF 20%	50V
C216	1-136-159-00	FILM 0.033uF 5%	50V	C562	1-136-173-00	FILM 0.47uF 5%	50V
C217	1-126-059-11	ELECT 10uF 20%	50V	C563	1-136-161-00	FILM 0.047uF 5%	50V
C218	1-126-059-11	ELECT 10uF 20%	50V	C564	1-136-161-00	FILM 0.047uF 5%	50V
C219	1-126-027-11	ELECT 1000uF 20%	25V	C567	1-136-153-00	FILM 0.01uF 5%	50V
C220	1-136-153-00	FILM 0.01uF 5%	50V	C601	1-164-085-11	CERAMIC 0.001uF 10%	50V
C221	1-126-059-11	ELECT 10uF 20%	50V	C602	1-124-994-11	ELECT 100uF 20%	6.3V
				C603	1-136-157-00	FILM 0.022uF 5%	50V
				C604	1-124-994-11	ELECT 100uF 20%	6.3V
				< CONNECTOR >			
				* CN1	1-565-792-11	PIN, CONNECTOR 2P	
				CN2	1-580-230-11	PIN, CONNECTOR (PC BOARD) 2P	
				CN4	1-564-321-00	PIN, CONNECTOR 2P	
				* CN201	1-565-561-11	PIN, CONNECTOR 3P (AU BUS)	
				* CN202	1-564-506-11	PLUG, CONNECTOR 3P	
				* CN203	1-568-826-11	SOCKET, CONNECTOR 7P	
				* CN204	1-564-242-00	PIN, CONNECTOR 5P	
				CN501	1-564-506-11	PLUG, CONNECTOR 3P	

# MAIN

Ref. No.	Part No.	Description	Remark
* CN502	1-564-508-11	PLUG, CONNECTOR 5P	
< DIODE >			
D201	8-719-987-63	DIODE 1N4148M	
D202	8-719-987-63	DIODE 1N4148M	
D203	8-719-200-02	DIODE 10E2	
D204	8-719-200-02	DIODE 10E2	
D205	8-719-200-02	DIODE 10E2	
D206	8-719-200-02	DIODE 10E2	
D207	8-719-001-91	DIODE UZL-15M	
D208	8-719-001-91	DIODE UZL-15M	
D209	8-719-200-82	DIODE 11ES2	
D210	8-719-200-82	DIODE 11ES2	
D211	8-719-200-82	DIODE 11ES2	
D212	8-719-200-82	DIODE 11ES2	
D213	8-719-200-82	DIODE 11ES2	
D214	8-719-200-82	DIODE 11ES2	
D215	8-719-200-82	DIODE 11ES2	
D216	8-719-200-82	DIODE 11ES2	
D217	8-719-510-68	DIODE D5SBA20F01	
D218	8-719-987-63	DIODE 1N4148M	
D219	8-719-200-82	DIODE 11ES2	
D220	8-719-200-82	DIODE 11ES2	
D221	8-719-933-33	DIODE HZS6A1L	
D222	8-719-933-33	DIODE HZS6A1L	
D501	8-719-987-63	DIODE 1N4148M	
D502	8-719-000-60	DIODE UZL-6M2	
D503	8-719-900-19	DIODE SLR34UW5	
D551	8-719-987-63	DIODE 1N4148M	
D552	8-719-000-60	DIODE UZL-6M2	
D553	8-719-900-19	DIODE SLR34UW5	
D601	8-719-987-63	DIODE 1N4148M	
D602	8-719-987-63	DIODE 1N4148M	
D603	8-719-987-63	DIODE 1N4148M	
D604	8-719-987-63	DIODE 1N4148M	
D651	8-719-987-63	DIODE 1N4148M	
D652	8-719-987-63	DIODE 1N4148M	
< FUSE >			
△F1	1-532-078-00	FUSE, TIME LAG (T1A 250V)	
△F2	1-532-259-00	FUSE, TIME LAG (T1.6A 250V)	
< IC >			
IC203	8-759-231-53	IC TA7805S	
IC601	8-759-111-68	IC uPC1237HA	
< COIL >			
* L501	1-420-872-00	COIL, AIR CORE	
* L551	1-420-872-00	COIL, AIR CORE	

Ref. No.	Part No.	Description	Remark
< TRANSISTOR >			
Q201	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q202	8-729-209-15	TRANSISTOR 2SD2012	
Q203	8-729-141-83	TRANSISTOR 2SB1094-LK	
Q501	8-729-140-82	TRANSISTOR 2SA988-PAFAEA	
Q502	8-729-620-18	TRANSISTOR 2SA979-FG	
Q503	8-729-119-78	TRANSISTOR 2SC403SP-51	
Q504	8-729-119-78	TRANSISTOR 2SC403SP-51	
Q505	8-729-021-74	TRANSISTOR 2SA949-OY-TPE6	
Q506	8-729-209-15	TRANSISTOR 2SD2012	
Q507	8-729-021-73	TRANSISTOR 2SC2229-OY-TPE6	
Q508	8-729-232-45	TRANSISTOR 2SK1529-Y	
Q509	8-729-232-46	TRANSISTOR 2SJ200-Y	
Q510	8-729-020-82	TRANSISTOR 2SC3421-OY	
Q511	8-729-020-83	TRANSISTOR 2SA1358-OY	
Q551	8-729-140-82	TRANSISTOR 2SA988-PAFAEA	
Q552	8-729-620-18	TRANSISTOR 2SA979-FG	
Q553	8-729-119-78	TRANSISTOR 2SC403SP-51	
Q554	8-729-119-78	TRANSISTOR 2SC403SP-51	
Q555	8-729-021-74	TRANSISTOR 2SA949-OY-TPE6	
Q556	8-729-209-15	TRANSISTOR 2SD2012	
Q557	8-729-021-73	TRANSISTOR 2SC2229-OY-TPE6	
Q558	8-729-232-45	TRANSISTOR 2SK1529-Y	
Q559	8-729-232-46	TRANSISTOR 2SJ200-Y	
Q560	8-729-020-82	TRANSISTOR 2SC3421-OY	
Q561	8-729-020-83	TRANSISTOR 2SA1358-OY	
Q601	8-729-140-82	TRANSISTOR 2SA988-PAFAEA	
Q651	8-729-140-82	TRANSISTOR 2SA988-PAFAEA	
< RESISTOR >			
△R201	1-249-421-11	CARBON 2.2K 5% 1/4W F	
R202	1-259-454-11	CARBON 12K 5% 1/6W (G)	
R202	1-259-456-11	CARBON 15K 5% 1/6W (AEP, UK)	
R203	1-259-454-11	CARBON 12K 5% 1/6W (G)	
R203	1-259-456-11	CARBON 15K 5% 1/6W (AEP, UK)	
R204	1-219-136-11	FUSIBLE 0.22 10% 1/4W	
R205	1-219-136-11	FUSIBLE 0.22 10% 1/4W	
△R206	1-212-873-11	FUSIBLE 47 5% 1/4W F	
R207	1-259-440-11	CARBON 3.3K 5% 1/6W	
R208	1-259-440-11	CARBON 3.3K 5% 1/6W	
R501	1-259-428-11	CARBON 1K 5% 1/6W	
R502	1-259-464-11	CARBON 33K 5% 1/6W	
R503	1-259-416-11	CARBON 330 5% 1/6W	
R504	1-259-436-11	CARBON 2.2K 5% 1/6W	
R505	1-259-412-11	CARBON 220 5% 1/6W	
R506	1-259-462-11	CARBON 27K 5% 1/6W	
R507	1-259-446-11	CARBON 5.6K 5% 1/6W	
R508	1-259-422-11	CARBON 560 5% 1/6W	
R509	1-259-440-11	CARBON 3.3K 5% 1/6W	
R510	1-259-438-11	CARBON 2.7K 5% 1/6W	

The components identified by mark △ or dotted line with mark △ are critical for safety.  
Replace only with part number specified.



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
R511	1-259-436-11	CARBON	2.2K 5% 1/6W	R604	1-249-792-11	CARBON	390 5% 1/2W (AEP, UK)
R513	1-259-464-11	CARBON	33K 5% 1/6W	<u>△</u> R605	1-215-914-11	METAL OXIDE	330 5% 3W F(G)
R514	1-259-380-11	CARBON	10 5% 1/6W	<u>△</u> R605	1-215-915-11	METAL OXIDE	470 5% 3W F(AEP, UK)
R515	1-259-380-11	CARBON	10 5% 1/6W	R606	1-259-452-11	CARBON	10K 5% 1/6W
R516	1-259-388-11	CARBON	22 5% 1/6W	R607	1-259-484-11	CARBON	220K 5% 1/6W
R517	1-259-388-11	CARBON	22 5% 1/6W	R608	1-259-470-11	CARBON	56K 5% 1/6W
<u>△</u> R521	1-212-857-00	FUSIBLE	10 5% 1/4W F	R609	1-247-764-11	CARBON	10K 5% 1/2W
R522	1-259-412-11	CARBON	220 5% 1/6W	R651	1-259-428-11	CARBON	1K 5% 1/6W
R523	1-259-412-11	CARBON	220 5% 1/6W	R652	1-259-456-11	CARBON	15K 5% 1/6W
R524	1-259-388-11	CARBON	22 5% 1/6W	R653	1-259-484-11	CARBON	220K 5% 1/6W
R525	1-259-388-11	CARBON	22 5% 1/6W	R654	1-249-661-11	CARBON	330 5% 1/2W (G)
<u>△</u> R526	1-212-881-11	FUSIBLE	100 5% 1/4W F	R654	1-249-792-11	CARBON	390 5% 1/2W (AEP, UK)
<u>△</u> R527	1-212-881-11	FUSIBLE	100 5% 1/4W F	< VARIABLE RESISTOR >			
<u>△</u> R528	1-217-151-00	METAL PLATE	0.22 2W F	RV501	1-241-761-11	RES, ADJ, CERMET 1K (DC BIAS L-CH)	
<u>△</u> R529	1-217-151-00	METAL PLATE	0.22 2W F	RV551	1-241-761-11	RES, ADJ, CERMET 1K (DC BIAS R-CH)	
<u>△</u> R530	1-212-857-00	FUSIBLE	10 5% 1/4W F	< RELAY >			
<u>△</u> R531	1-212-994-00	FUSIBLE	330 5% 1/2W F	<u>△</u> RY201	1-515-849-11	RELAY	
R551	1-259-428-11	CARBON	1K 5% 1/6W	RY601	1-515-727-11	RELAY	
R552	1-259-464-11	CARBON	33K 5% 1/6W	RY602	1-515-676-11	RELAY	
R553	1-259-416-11	CARBON	330 5% 1/6W	< TRANSFORMER >			
R554	1-259-436-11	CARBON	2.2K 5% 1/6W	<u>△</u> T1	1-449-071-21	TRANSFORMER, POWER	
R555	1-259-412-11	CARBON	220 5% 1/6W	< BASE POST >			
R556	1-259-462-11	CARBON	27K 5% 1/6W	TB1	1-535-139-00	BASE POST 22MM (10MM PITCH) 2P	
R557	1-259-446-11	CARBON	5.6K 5% 1/6W	< TERMINAL >			
R558	1-259-422-11	CARBON	560 5% 1/6W	TM501	1-537-530-41	TERMINAL BOARD (SPEAKERS)	
R559	1-259-440-11	CARBON	3.3K 5% 1/6W	* TP501	1-535-115-00	TERMINAL	
R560	1-259-438-11	CARBON	2.7K 5% 1/6W	* TP551	1-535-115-00	TERMINAL	
R561	1-259-436-11	CARBON	2.2K 5% 1/6W	*****			
R563	1-259-464-11	CARBON	33K 5% 1/6W	* 1-653-558-11	P. J. JUMPER BOARD		
R564	1-259-380-11	CARBON	10 5% 1/6W	*****			
R565	1-259-380-11	CARBON	10 5% 1/6W	< CAPACITOR >			
R566	1-259-388-11	CARBON	22 5% 1/6W	C119	1-126-022-11	ELECT	47uF 20% 25V
R567	1-259-388-11	CARBON	22 5% 1/6W	C120	1-126-022-11	ELECT	47uF 20% 25V
<u>△</u> R569	1-212-869-00	FUSIBLE	33 5% 1/4W F	C121	1-124-927-11	ELECT	4.7uF 20% 100V
<u>△</u> R570	1-212-869-00	FUSIBLE	33 5% 1/4W F	C123	1-162-207-31	CERAMIC	22PF 5% 50V
<u>△</u> R571	1-212-857-00	FUSIBLE	10 5% 1/4W F	C124	1-124-916-11	ELECT	22uF 20% 63V
R572	1-259-412-11	CARBON	220 5% 1/6W	C125	1-164-159-11	CERAMIC	0.1uF 50V
R573	1-259-412-11	CARBON	220 5% 1/6W	C169	1-126-022-11	ELECT	47uF 20% 25V
R574	1-259-388-11	CARBON	22 5% 1/6W				
R575	1-259-388-11	CARBON	22 5% 1/6W				
<u>△</u> R576	1-212-881-11	FUSIBLE	100 5% 1/4W F				
<u>△</u> R577	1-212-881-11	FUSIBLE	100 5% 1/4W F				
<u>△</u> R578	1-217-151-00	METAL PLATE	0.22 2W F				
<u>△</u> R579	1-217-151-00	METAL PLATE	0.22 2W F				
<u>△</u> R580	1-212-857-00	FUSIBLE	10 5% 1/4W F				
<u>△</u> R581	1-212-994-00	FUSIBLE	330 5% 1/2W F				
R601	1-259-428-11	CARBON	1K 5% 1/6W				
R602	1-259-456-11	CARBON	15K 5% 1/6W				
R603	1-259-484-11	CARBON	220K 5% 1/6W				
R604	1-249-661-11	CARBON	330 5% 1/2W (G)				

The components identified by mark △ or dotted line with mark △ are critical for safety.  
Replace only with part number specified.

Ref.No.	Part No.	Description	Remark			Ref.No.	Part No.	Description	Remark		
C170	1-126-022-11	ELECT	47uF	20%	25V	R184	1-259-428-11	CARBON	1K	5%	1/6W
C171	1-124-927-11	ELECT	4.7uF	20%	100V			< RELAY >			
C173	1-162-207-31	CERAMIC	22PF	5%	50V						
C174	1-124-916-11	ELECT	22uF	20%	63V	RY101	1-515-803-11	RELAY			
C175	1-164-159-11	CERAMIC	0.1uF		50V			*****			
		< CONNECTOR >									
* CN101	1-564-509-11	PLUG, CONNECTOR 6P				*	A-4371-633-A	PANEL BOARD, COMPLETE (AEP, UK)			
* CN102	1-564-506-11	PLUG, CONNECTOR 3P						*****			
* CN103	1-564-506-11	PLUG, CONNECTOR 3P									
* CN104	1-568-826-11	SOCKET, CONNECTOR 7P				*	A-4371-640-A	PANEL BOARD, COMPLETE (G)			
		< DIODE >						*****			
D101	8-719-987-63	DIODE	1N4148M					< CAPACITOR >			
D102	8-719-987-63	DIODE	1N4148M			C301	1-125-623-11	DOUBLE LAYERS	0.22F		5.5V
D103	8-719-987-63	DIODE	1N4148M			C302	1-126-157-11	ELECT	10uF	20%	16V
D104	8-719-987-63	DIODE	1N4148M			C303	1-124-994-11	ELECT	100uF	20%	10V
D105	8-719-987-63	DIODE	1N4148M			C305	1-164-159-11	CERAMIC	0.1uF		50V
						C306	1-164-159-11	CERAMIC	0.1uF		50V
D106	8-719-987-63	DIODE	1N4148M								
D107	8-719-987-63	DIODE	1N4148M			C307	1-126-157-11	ELECT	10uF	20%	16V
		< IC >				C308	1-161-494-00	CERAMIC	0.022uF		25V
IC102	8-759-711-35	IC	NJM4580D			C309	1-161-494-00	CERAMIC	0.022uF		25V
IC103	8-759-051-63	IC	TC9215P			C312	1-124-994-11	ELECT	100uF	20%	10V
IC104	8-759-051-63	IC	TC9215P			C313	1-161-494-00	CERAMIC	0.022uF		25V
IC105	8-759-051-63	IC	TC9215P								
		< TRANSISTOR >				C314	1-164-159-11	CERAMIC	0.1uF		50V
Q101	8-729-141-26	TRANSISTOR	2SC3622A-LK			C402	1-137-189-11	FILM	0.18uF	5%	50V
Q102	8-729-620-05	TRANSISTOR	2SC2603-EF			C403	1-136-175-00	FILM	0.68uF	5%	50V
Q151	8-729-141-26	TRANSISTOR	2SC3622A-LK			C404	1-136-158-00	FILM	0.027uF	5%	50V
		< RESISTOR >				C405	1-136-164-00	FILM	0.082uF	5%	50V
R128	1-259-500-11	CARBON	1M	5%	1/6W						
R129	1-259-476-11	CARBON	100K	5%	1/6W	C452	1-137-189-11	FILM	0.18uF	5%	50V
R130	1-259-428-11	CARBON	1K	5%	1/6W	C453	1-136-175-00	FILM	0.68uF	5%	50V
R131	1-259-428-11	CARBON	1K	5%	1/6W	C454	1-136-158-00	FILM	0.027uF	5%	50V
R132	1-259-442-11	CARBON	3.9K	5%	1/6W	C455	1-136-164-00	FILM	0.082uF	5%	50V
						C521	1-164-070-11	CERAMIC	100PF	5%	50V
R133	1-259-428-11	CARBON	1K	5%	1/6W			< CONNECTOR >			
R134	1-259-428-11	CARBON	1K	5%	1/6W	* CN301	1-568-826-11	SOCKET, CONNECTOR 7P			
R135	1-259-436-11	CARBON	2.2K	5%	1/6W	* CN302	1-568-826-11	SOCKET, CONNECTOR 7P			
R136	1-259-476-11	CARBON	100K	5%	1/6W	* CN304	1-564-508-11	PLUG, CONNECTOR 5P			
R137	1-259-452-11	CARBON	10K	5%	1/6W	* CN401	1-564-509-11	PLUG, CONNECTOR 6P			
								< DIODE >			
R138	1-259-452-11	CARBON	10K	5%	1/6W	D301	8-719-200-82	DIODE	11ES2		
R139	1-259-452-11	CARBON	10K	5%	1/6W	D302	8-719-200-82	DIODE	11ES2		
R178	1-259-500-11	CARBON	1M	5%	1/6W	D304	8-719-987-63	DIODE	1N4148M		
R179	1-259-476-11	CARBON	100K	5%	1/6W	D305	8-719-987-63	DIODE	1N4148M		
R180	1-259-428-11	CARBON	1K	5%	1/6W	D306	8-719-987-63	DIODE	1N4148M		
R181	1-259-428-11	CARBON	1K	5%	1/6W	D307	8-719-313-43	DIODE	SEL2210S-TH10	(SOURCE DIRECT)	
R182	1-259-442-11	CARBON	3.9K	5%	1/6W	D308	8-719-313-43	DIODE	SEL2210S-TH10	(DAT/VIDEO)	
R183	1-259-428-11	CARBON	1K	5%	1/6W	D309	8-719-313-43	DIODE	SEL2210S-TH10	(MD)	
						D310	8-719-313-43	DIODE	SEL2210S-TH10	(TAPE)	
						D311	8-719-313-43	DIODE	SEL2210S-TH10	(CD)	

PANEL	PIN JACK
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Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
D312	8-719-313-43	DIODE SEL2210S-TH10 (TUNER)		R409	1-259-418-11	CARBON 390 5% 1/6W	
D313	8-719-313-43	DIODE SEL2210S-TH10 (PHONO)		R451	1-259-428-11	CARBON 1K 5% 1/6W	
D314	8-719-987-63	DIODE 1N4148M					
D318	8-719-987-63	DIODE 1N4148M		R452	1-259-438-11	CARBON 2.7K 5% 1/6W	
D319	8-719-987-63	DIODE 1N4148M		R453	1-259-428-11	CARBON 1K 5% 1/6W	
< IC >				R454	1-259-452-11	CARBON 10K 5% 1/6W	
IC301	8-759-284-90	IC TMP87C846N-4109		R457	1-259-460-11	CARBON 22K 5% 1/6W	
IC302	8-759-635-63	IC M51943BSL		R458	1-259-500-11	CARBON 1M 5% 1/6W	
< TRANSISTOR >							
Q301	8-729-900-63	TRANSISTOR DTA124ES		R459	1-259-418-11	CARBON 390 5% 1/6W	
Q302	8-729-620-05	TRANSISTOR 2SC2603-EF		< VARIABLE RESISTOR >			
Q303	8-729-900-61	TRANSISTOR DTA114ES		RV401	1-241-972-11	RES, VAR, CARBON 10K/10K (BASS)	
Q304	8-729-900-61	TRANSISTOR DTA114ES		RV402	1-241-974-11	RES, VAR, CARBON 10K/10K (TREBLE)	
Q305	8-729-900-36	TRANSISTOR DTC124ES		RV403	1-241-973-11	RES, VAR, CARBON 100K/100K (BALANCE)	
< RESISTOR >				< SWITCH >			
R301	1-249-429-11	CARBON 10K 5% 1/4W		S301	1-554-303-21	SWITCH, TACTILE (SOURCE DIRECT)	
R302	1-249-433-11	CARBON 22K 5% 1/4W		S302	1-692-974-11	SWITCH, ROTARY (FUNCTION)	
R303	1-249-429-11	CARBON 10K 5% 1/4W		< VIBRATOR >			
△R304	1-249-393-11	CARBON 10 5% 1/4W F		X301	1-579-125-11	VIBRATOR, CERAMIC (8MHz)	
R305	1-249-429-11	CARBON 10K 5% 1/4W		*****			
R306	1-249-429-11	CARBON 10K 5% 1/4W		* 1-653-557-11	PIN JACK BOARD		
△R307	1-249-417-11	CARBON 1K 5% 1/4W F		*****			
R308	1-249-426-11	CARBON 5.6K 5% 1/4W		< CAPACITOR >			
R309	1-249-433-11	CARBON 22K 5% 1/4W		C111	1-124-925-11	ELECT 2.2uF 20% 100V	
R310	1-249-431-11	CARBON 15K 5% 1/4W		C113	1-162-282-31	CERAMIC 100PF 10% 50V	
△R311	1-249-427-11	CARBON 6.8K 5% 1/4W F		C114	1-124-910-11	ELECT 47uF 20% 50V	
△R312	1-249-417-11	CARBON 1K 5% 1/4W F		C115	1-162-219-31	CERAMIC 68PF 5% 50V	
△R313	1-249-423-11	CARBON 3.3K 5% 1/4W F		C116	1-130-480-00	MYLAR 0.0056uF 5% 50V	
△R314	1-249-423-11	CARBON 3.3K 5% 1/4W F		C117	1-130-473-00	MYLAR 0.0015uF 5% 50V	
△R315	1-249-417-11	CARBON 1K 5% 1/4W F		C118	1-124-925-11	ELECT 2.2uF 20% 100V	
△R316	1-249-425-11	CARBON 4.7K 5% 1/4W F		C161	1-124-925-11	ELECT 2.2uF 20% 100V	
△R321	1-249-417-11	CARBON 1K 5% 1/4W F		C163	1-162-282-31	CERAMIC 100PF 10% 50V	
△R322	1-249-417-11	CARBON 1K 5% 1/4W F		C164	1-124-910-11	ELECT 47uF 20% 50V	
R323	1-249-429-11	CARBON 10K 5% 1/4W		C165	1-162-219-31	CERAMIC 68PF 5% 50V	
△R324	1-249-417-11	CARBON 1K 5% 1/4W F		C166	1-130-480-00	MYLAR 0.0056uF 5% 50V	
△R325	1-249-417-11	CARBON 1K 5% 1/4W F		C167	1-130-473-00	MYLAR 0.0015uF 5% 50V	
△R326	1-249-417-11	CARBON 1K 5% 1/4W F		C168	1-124-925-11	ELECT 2.2uF 20% 100V	
△R327	1-249-417-11	CARBON 1K 5% 1/4W F		< IC >			
△R328	1-249-414-11	CARBON 560 5% 1/4W F		IC101	8-759-710-59	IC NJM4580D-D	
△R329	1-249-414-11	CARBON 560 5% 1/4W F		< JACK >			
△R330	1-249-414-11	CARBON 560 5% 1/4W F		* J101	1-764-389-11	JACK, PIN 2P (PHONO IN)	
R333	1-249-433-11	CARBON 22K 5% 1/4W		J102	1-766-261-11	JACK, PIN 4P (TUNER/CD IN)	
R401	1-259-428-11	CARBON 1K 5% 1/6W		J103	1-565-304-11	JACK, PIN 4P (TAPE IN/OUT)	
R402	1-259-438-11	CARBON 2.7K 5% 1/6W		J104	1-565-303-11	JACK, PIN 6P (MD IN/OUT)	
R403	1-259-428-11	CARBON 1K 5% 1/6W					
R404	1-259-452-11	CARBON 10K 5% 1/6W					
R407	1-259-460-11	CARBON 22K 5% 1/6W					
R408	1-259-500-11	CARBON 1M 5% 1/6W					

The components identified by mark △ or dotted line with mark △ are critical for safety.  
Replace only with part number specified.

## PIN JACK

## POWER SWITCH

## VOLUME

Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
J105	1-565-303-11	JACK, PIN 6P (DAT/VIDEO/ADAPTOR IN/OUT)		R171	1-259-428-11	CARBON 1K 5% 1/6W	
		< RESISTOR >		R172	1-259-494-11	CARBON 560K 5% 1/6W	
R102	1-259-428-11	CARBON 1K 5% 1/6W		R173	1-259-472-11	CARBON 68K 5% 1/6W	
R103	1-259-500-11	CARBON 1M 5% 1/6W		R174	1-259-470-11	CARBON 56K 5% 1/6W	
R104	1-259-428-11	CARBON 1K 5% 1/6W		R175	1-259-490-11	CARBON 390K 5% 1/6W	
R105	1-259-500-11	CARBON 1M 5% 1/6W		R176	1-259-412-11	CARBON 220 5% 1/6W	
R106	1-259-420-11	CARBON 470 5% 1/6W		R177	1-259-476-11	CARBON 100K 5% 1/6W	
R107	1-259-428-11	CARBON 1K 5% 1/6W		*****			
R108	1-259-500-11	CARBON 1M 5% 1/6W		*	1-653-562-11	POWER SWITCH BOARD	
R109	1-259-420-11	CARBON 470 5% 1/6W				*****	
R110	1-259-428-11	CARBON 1K 5% 1/6W				< CAPACITOR >	
R111	1-259-500-11	CARBON 1M 5% 1/6W		C310	1-126-157-11	ELECT 10uF 20% 16V	
R112	1-259-420-11	CARBON 470 5% 1/6W		C311	1-162-306-11	CERAMIC 0.01uF 30% 16V	
R113	1-259-428-11	CARBON 1K 5% 1/6W				< DIODE >	
R114	1-259-500-11	CARBON 1M 5% 1/6W		D315	8-719-987-63	DIODE 1N4148M	
R115	1-259-420-11	CARBON 470 5% 1/6W		D316	8-719-313-40	DIODE SEL1516W (ON/STANDBY)	
R116	1-259-428-11	CARBON 1K 5% 1/6W				< IC >	
R117	1-259-500-11	CARBON 1M 5% 1/6W		IC303	8-749-922-36	IC GP1U50XB	
R118	1-259-476-11	CARBON 100K 5% 1/6W				< RESISTOR >	
R119	1-259-428-11	CARBON 1K 5% 1/6W		△R334	1-249-414-11	CARBON 560 5% 1/4W F	
R120	1-259-476-11	CARBON 100K 5% 1/6W		△R335	1-249-410-11	CARBON 270 5% 1/4W F	
R121	1-259-428-11	CARBON 1K 5% 1/6W				< SWITCH >	
R122	1-259-494-11	CARBON 560K 5% 1/6W		S303	1-554-118-00	SWITCH, PUSH (1 KEY)(POWER)	
R123	1-259-472-11	CARBON 68K 5% 1/6W		*****			
R124	1-259-470-11	CARBON 56K 5% 1/6W		*	1-653-556-11	VOLUME BOARD	
R125	1-259-490-11	CARBON 390K 5% 1/6W				*****	
R126	1-259-412-11	CARBON 220 5% 1/6W				< CAPACITOR >	
R127	1-259-476-11	CARBON 100K 5% 1/6W		C406	1-164-159-11	CERAMIC 0.1uF 50V	
R152	1-259-428-11	CARBON 1K 5% 1/6W		C407	1-124-443-00	ELECT 100uF 20% 10V	
R153	1-259-500-11	CARBON 1M 5% 1/6W				< CONNECTOR >	
R154	1-259-428-11	CARBON 1K 5% 1/6W		* CN402	1-564-506-11	PLUG, CONNECTOR 3P	
R155	1-259-500-11	CARBON 1M 5% 1/6W		CN403	1-564-506-11	PLUG, CONNECTOR 3P	
R156	1-259-420-11	CARBON 470 5% 1/6W		* CN404	1-564-508-11	PLUG, CONNECTOR 5P	
R157	1-259-428-11	CARBON 1K 5% 1/6W				< DIODE >	
R158	1-259-500-11	CARBON 1M 5% 1/6W		D401	8-719-200-82	DIODE 11ES2	
R159	1-259-420-11	CARBON 470 5% 1/6W				< IC >	
R160	1-259-428-11	CARBON 1K 5% 1/6W		IC401	8-759-962-08	IC BA6208	
R161	1-259-500-11	CARBON 1M 5% 1/6W					
R162	1-259-420-11	CARBON 470 5% 1/6W					
R163	1-259-428-11	CARBON 1K 5% 1/6W					
R164	1-259-500-11	CARBON 1M 5% 1/6W					
R165	1-259-420-11	CARBON 470 5% 1/6W					
R166	1-259-428-11	CARBON 1K 5% 1/6W					
R167	1-259-500-11	CARBON 1M 5% 1/6W					
R168	1-259-476-11	CARBON 100K 5% 1/6W					
R169	1-259-428-11	CARBON 1K 5% 1/6W					
R170	1-259-476-11	CARBON 100K 5% 1/6W					

The components identified by mark  $\Delta$  or dotted line with mark  $\Delta$  are critical for safety.  
Replace only with part number specified.

Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
		< RESISTOR >				***** HARDWARE LIST *****	
△R410	1-249-389-11	CARBON 4.7 5% 1/4W F		#1	7-685-645-79	SCREW +BVTP 3X6 TYPE2 N-S	
		< VARIABLE RESISTOR >		#2	7-682-560-04	SCREW +BVTT 4X6 (S)	
RV404	1-241-921-21	RES, VAR, CARBON 120K/120K (ATTENUATOR)		#3	7-685-650-79	SCREW +BVTP 3X16 TYPE2	
		*****		#4	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	
		MISCELLANEOUS					
		*****					
14	1-751-801-11	WIRE (FLAT TYPE) (7 CORE)					
17	1-696-986-11	WIRE (FLAT TYPE) (7 CORE)					
△51	1-575-651-21	CORD, POWER (AEP, G)					
△51	1-696-571-11	CORD, POWER (UK)					
61	1-535-706-11	PLUG, JUMPER					
65	1-533-293-11	FUSE HOLDER					
68	1-537-770-11	TERMINAL BOARD, GROUND					
* 69	1-560-242-31	BUS BAR 5P					
△CNJ1	1-526-794-11	OUTLET, AC					
* CNL501	1-690-880-11	LEAD (WITH CONNECTOR)					
△F1	1-532-078-00	FUSE, TIME LAG (T1A 250V)					
△F2	1-532-259-00	FUSE, TIME LAG (T1.6A 250V)					
Q506	8-729-209-15	TRANSISTOR 2SD2012					
Q508	8-729-232-45	TRANSISTOR 2SK1529-Y					
Q509	8-729-232-46	TRANSISTOR 2SJ200-Y					
Q556	8-729-209-15	TRANSISTOR 2SD2012					
Q558	8-729-232-45	TRANSISTOR 2SK1529-Y					
Q559	8-729-232-46	TRANSISTOR 2SJ200-Y					
△T2	1-426-823-11	TRANSFORMER, POWER (G)					
△T2	1-426-824-11	TRANSFORMER, POWER (AEP, UK)					
		*****					
		ACCESSORIES & PACKING MATERIALS					
		*****					
	1-467-796-11	REMOTE COMMANDER (RM-S1)					
	1-590-219-11	CORD (WITH CONNECTOR)					
	3-759-590-11	MANUAL, INSTRUCTION (ENGLISH, FRENCH, SPANISH, PORTUGUESE) (AEP)					
	3-759-590-41	MANUAL, INSTRUCTION (GERMAN, DUTCH, SWEDISH, ITALIAN) (AEP, G)					
	3-759-590-51	MANUAL, INSTRUCTION (ENGLISH) (UK)					
	4-955-381-01	CASE, BATTERY (for RM-S1)					
*	4-968-991-01	CUSHION (AEP, G)					
*	4-968-992-61	INDIVIDUAL CARTON (AEP, G)					
*	4-970-588-11	PLATE (PIN JACK 4P), INDICATION					
*	4-970-607-01	PLATE (PIN JACK 8P), INDICATION					
		*****					

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